GENITALIC SUBSTANTIATION OF FIRST RECORD IN THE NEW WORLD OF A REPRESENTATIVE OF THE PECULIAR OLD WORLD TABANID TRIBE RHINOMYZINI (DIPTERA: TABANIDAE)

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ABSTRACT—The genitalia of *Betrequia ocellata* from the Amazonas Basin substantiate assignment of this unusual tabanid fly to the tribe Rhinomyzini.

In 1970, Oldroyd described a "strange female horsefly" from the lower Amazon Basin in Brazil and considered it to be related to the Afro-Indian tribe Rhinomyzini, this being the first record of the tribe in the New World. He named the horsefly *Betrequia ocellata*, a new genus and a new species. The tribe Rhinomyzini has radiated widely in the Afro-Indian region and consists of bizarre forms which mostly breed in arboreal rot-holes. Oldroyd subsequently wrote that the original two specimens, now in the British Museum, were taken at different times by a lepidopterist, apparently in arboreal situations on a lower tributary of the Amazon near Pará, hence these flies have not been previously taken near the ground. If *B. ocellata* frequents the jungle canopy, it is interesting that no record has turned up in collections of biting insects in tree canopy studies, such as collections at jungle yellow fever stations (Fairchild, 1953). However, a third female was netted at ground level near Leticia, upper Colombian Amazonas, by Dr. Richard W. Merritt, now of Michigan State University (Philip, 1975). This specimen was loaned to us by Dr. Robert S. Lane of the State Health Department, Berkeley, California, and permission was granted to make a genitalic preparation.

A comparison is made with rhinomyzine genitalia of Old World species figured by Mackerras (1955) and Ovazza and Taufflieb (1954). They all agree on the characters that define the tribe: Caudal spermathecae are simple tubes without mushroomlike expansions, and terga IX and X are divided. The closest rhinomyzine genus treated by these authors is *Tabanocella* and, compared with our material (fig. 1), has the same sub pentagonal cerci, as well as similar structure of terga IX and X. Sternum VIII in *Tabanocella* is wider in the middle, not at the base as in *Betrequia*, but this, together with the convex base of the genital fork and little longer spermathecal ducts, we consider relates to differences at the generic level. The combs of the genital fork illustrated by Ovazza and Taufflieb (1954) show strong teeth

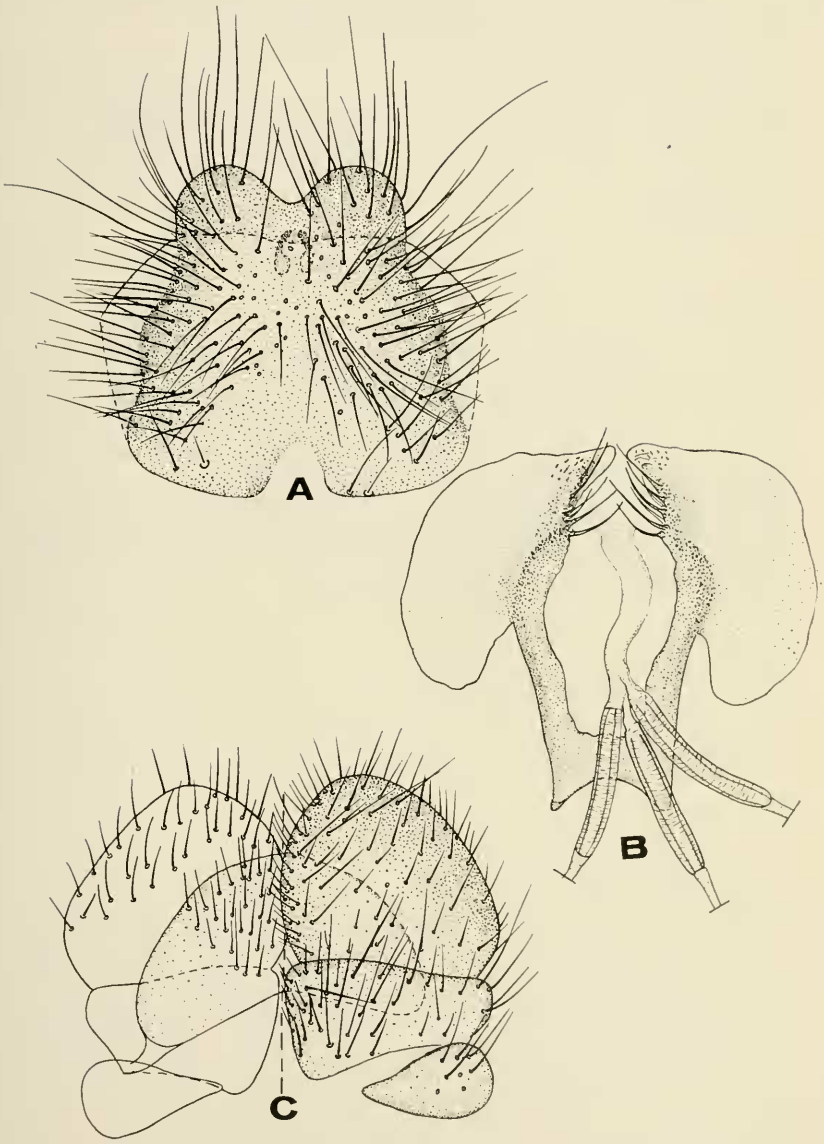

Fig. 1, Genitalia of *Betrequia ocellata*, female. A, eighth sternum and gonapophysis. B, genital fork with caudal spermathecal ducts. C, terga IX, X, cerci and hypoproct.

as in our preparation. We think that the genital structure, plus the bizarre body characters, support assignment of *Betrequia* to the Rhinomyzini in spite of the geographic disparity.

Oldroyd (1957) has pointed out that the haematophagous habits of adult females in the tribe are not universal, since some species lack piercing stylets. The condition of our specimen, which has a short proboscis with labella "closed like shells of a bivalve," could not be observed without dissection, and we were reluctant to further mutilate this unique fly.

References

Fairchild, G. B. 1953. Arboreal Tabanidae in Panama. Proc. Entomol. Soc. Wash. 55:239–243.

Mackerras, I. M. 1955. The classification and distribution of Tabanidae (Diptera). III. Subfamilies Scepsidinae and Chrysopinae. Austr. J. Zool. 3:583–633.

Oldroyd, H. 1957. Horseflies of the Ethiopian Region, III. Chrysopinae, Scepsidinae and Pangoniinae. London, Brit. Mus. (N.H.). 489 pp.

———. 1970. A new genus of Rhinomyzini (Diptera: Tabanidae), the first from South America. J. Nat. Hist. 4:249–253.

Ovazza, M. and R. Taufflieb. 1954. Les genitalia femelles des tabanides et leur importance en systématique. Ann. Parasitol. Hum. Comp. 29:250–264.

Philip, C. B. 1975. Confirmation of occurrence in Amazonas of the tabanid Tribe Rhinomyzini. Pan-Pac. Entomol. 51:95.